Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

AUG 12 1994

94-RPS-271

Mr. Randall F. Smith, Director
Hazardous Waste Division
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Ms. Dru Butler, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504

Dear Mr. Smith and Ms. Butler:

HANFORD FACILITY DANGEROUS WASTE PERMIT APPLICATION, SIMULATED HIGH-LEVEL WASTE SLURRY TREATMENT AND STORAGE UNIT (SHLWS T/S) PART A PERMIT APPLICATION (FORM 3), REVISION 2

This letter transmits Revision 2 of the Hanford Facility Dangerous Waste Part A Permit Application (Form 3) for the Simulated High Level Waste Slurry (SHLWS) Treatment and Storage (T/S) Unit. Revision 2 provides clarification of the location of the SHLWS T/S Unit within the 1234 Laydown Yard in the 3000 Area, adds two additional waste codes (D008 and D009) for waste characteristics identified during the current review process of the revised Closure Plan, and modifies the waste description to identify the presence of secondary process waste (contaminated soil from two spills and contaminated process equipment). The changes do not significantly alter the scope or content of the Permit Application.

Please note that on May 12, 1994, the U.S. Department of Energy, Richland Operations Office (RL), Westinghouse Hanford Company, and Pacific Northwest Laboratory (PNL) submitted a Notification of Dangerous Waste Activity, Form 2, for noncontiguous dangerous waste generating units and waste management units located in the 3000 Area at the Hanford Site. The May 12, 1994, letter explains the rationale for the submittal of a separate Form 2, and the need for a separate U.S. Environmental Protection Agency (EPA)/State Identification Number for the 3000 Area. Another revised Hanford Facility Dangerous Waste Part A Permit Application (Form 3) will be submitted for the SHLWS T/S Unit after a separate EPA/State Identification Number has been issued for the 3000 Area.

If you have any questions regarding the above, please contact Mr. C. E. Clark of RL on (509) 376-9333, or Mr. H. T. Tilden of PNL on (509) 376-0499.

Sincerely,

James E. Rasmussen, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy

EAP:RNK

B. D. Shipp, Manager
Engineering Technology Center
Pacific Northwest Laboratory

Enclosure

cc w/encl:
Administrative Records, H6-08
J. Atwood, Ecology
R. Bowman, WHC
T. Chikalla, PNL
S. Alexander, Ecology
D. Duncan, EPA
G. Davis, Ecology
B. Shipp, PNL
J. Stohr, Ecology
J. Witczak, Ecology

cc w/o encl:
D. Nylander, Ecology
S. Price, WHC
D. Sherwood, EPA
R. Jim, YIN
D. Powaukee, Nez Perce
W. Burke, CTUIR

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 character/inch).

FORM 3

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 8 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

MO. | DAY | YR. — FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

☐ 2. NEW FACILITY *(Complete item below)*

MO. | DAY | YR. — FOR NEW FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☐ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES - CODES AND CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numbers X-1 and X-2 below)*: *A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons.* The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	20,000	G		7				
2	T 0 4	550	U		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T04, S01--This permit covered a one-time proposal to immobilize approximately 200 55-gallon drums of a simulated high level waste slurry (formerly known as "PW-0" and "PW7/7A" material) and secondary waste generated during storage and treatment of the slurry. The program that originally procured this specialty chemical was eliminated before the material was used for R&D purposes. Although the material had been used intermittently, all remaining material with no future use was treated.

The treatment process consisted of neutralization and mixing with a grout within lined 55-gallon, DOT 17H containers. The treatment eliminated the characteristics of ignitability, corrosivity and EP Toxicity (currently TCLP). Photographs of the treatment equipment and storage areas are attached.

The grouted slurry was stored in drums at the site of treatment (3000 Area, see attached figure) until tests (EP Toxicity, Acute Fish and Rat Toxicity) were completed. These tests verified that the treated waste exhibited no dangerous waste characteristics.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	150,000	P	S01 T04	Storage/treatment
2	D002				
3	D005				
4	D006				
5	D007				
6	D008				
7	D009				
8	D011				
9	WT01				
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

9467205.137b

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

Material to be treated was designated as ignitable (D001), corrosive (D002) due to pH ≤2.0 and EP Toxic due to barium (D005), cadmium (D006), chromium (D007), lead (D008), mercury (D009) and silver (D011), and was also slightly radioactive (<2000pCi/g) due to naturally-occurring elements present. (This level of natural occurring radiation was not sufficient to designate the material as mixed waste.) The waste slurries were designation as extremely hazardous waste (EHW) toxic mixtures (WT01). This designation was due to the concentration and toxicity of nitric acid and metallic nitrate salts (i.e., silver nitrate, ferric nitrate) present in the wastes.

9413295.1377

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawings and photos.

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	8/12/94

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

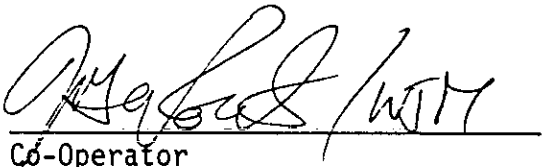
NAME *(print or type)*	SIGNATURE	DATE SIGNED
SEE ATTACHMENT		

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

8/10/94
Date

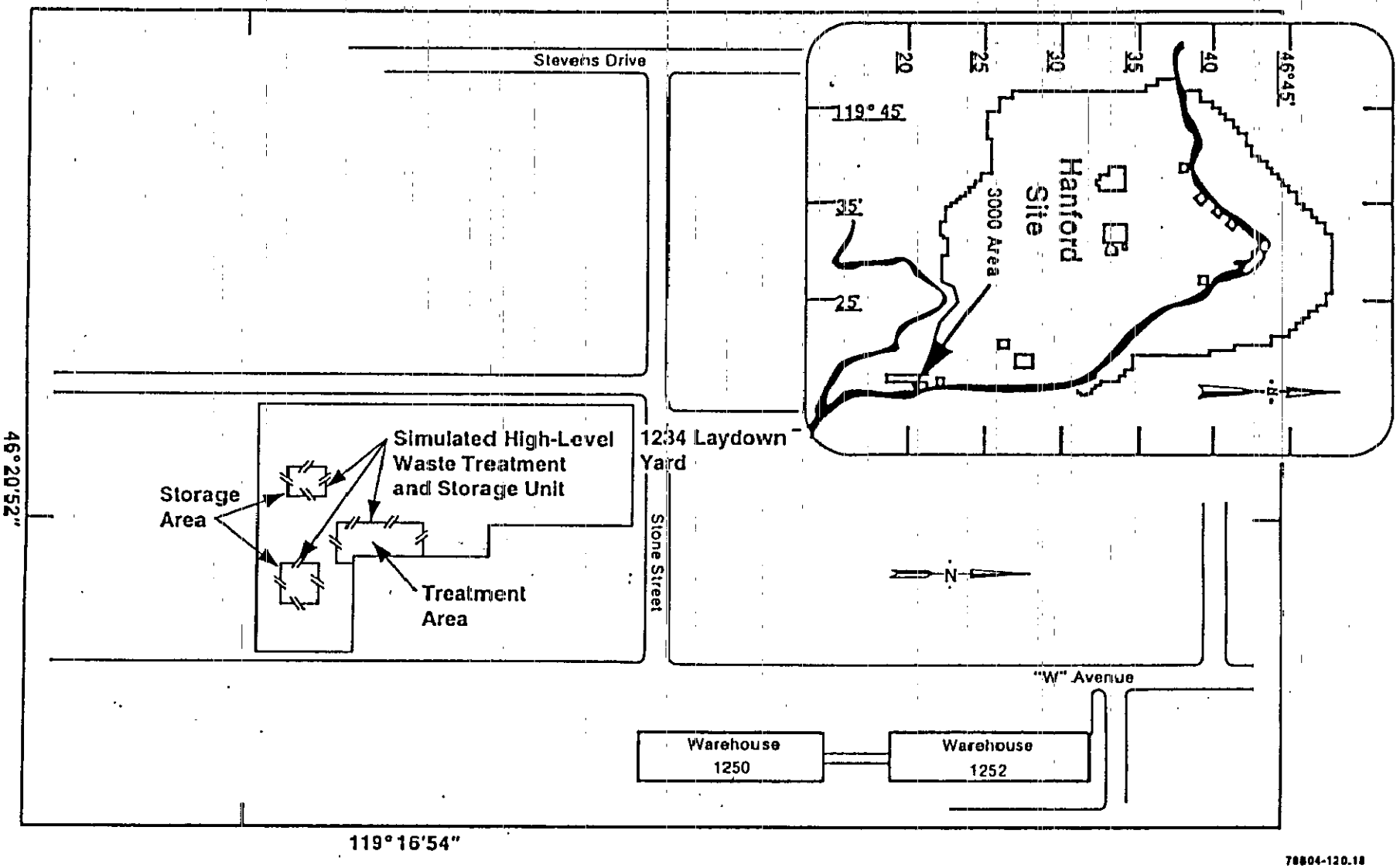


Co-Operator
William J. Madia, Director
Pacific Northwest Laboratory

8/11/94
Date

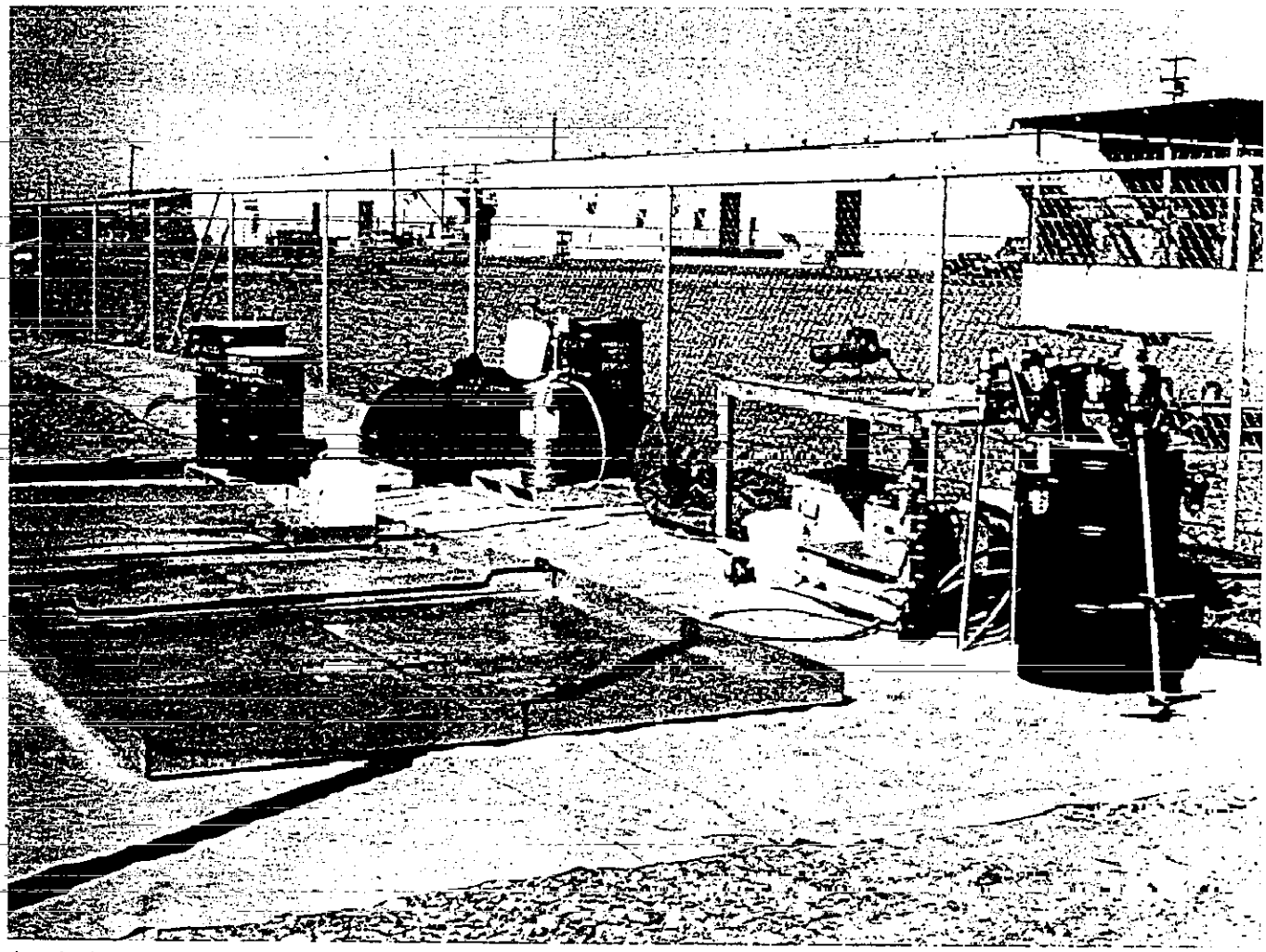
Simulated High-Level Waste Slurry Treatment/Storage

Site Plan (3000 Area)



WA7890008967

Simulated High-Level Waste Slurry Treatment/Storage
Treatment Site and Equipment



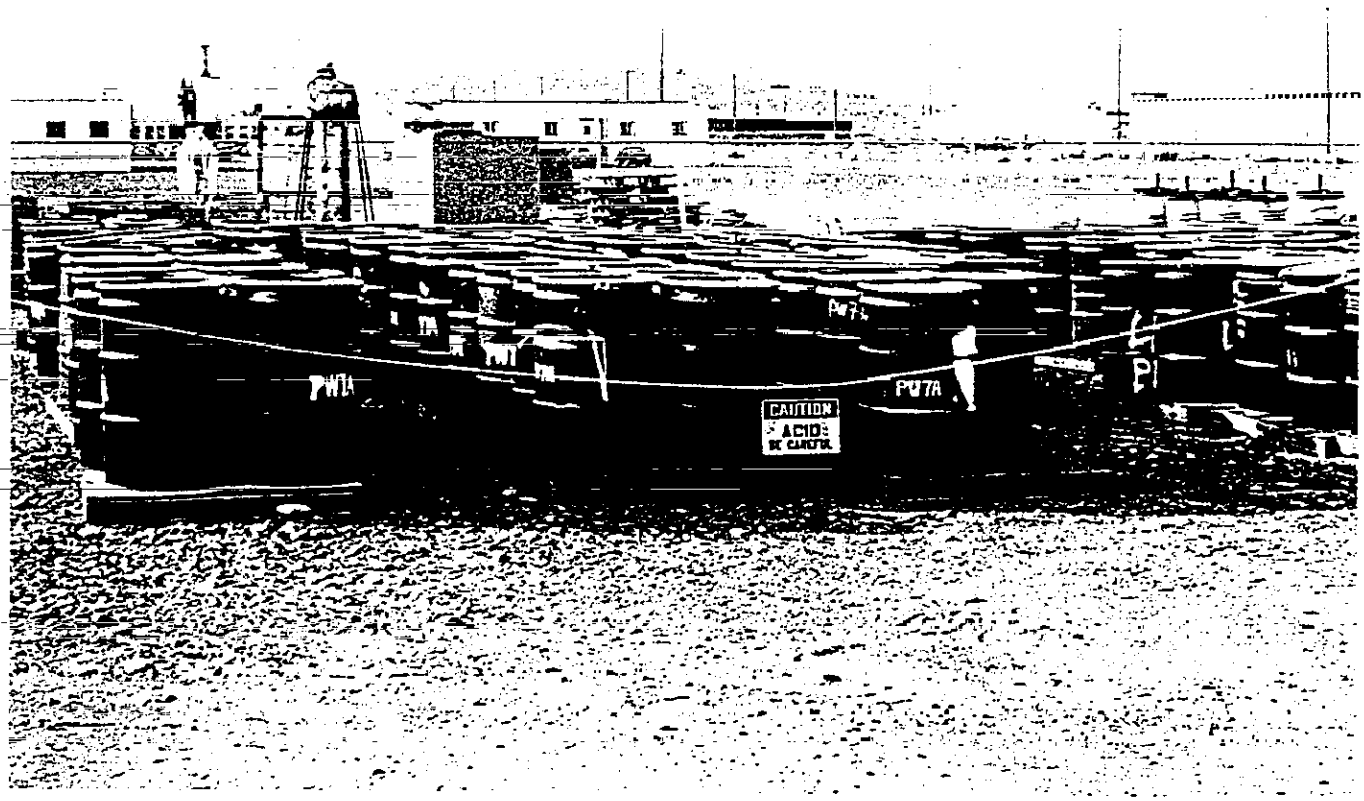
Longitude 119° 16'54"
Latitude 46° 20'52"

9004271-1CN
Photo Taken 1988

39005081.1

WA7890008967

Simulated High-Level Waste Slurry Treatment/Storage



Longitude 119° 16'54"
Latitude 46° 20'52"

8801374-2CN
Photo Taken 1988

39005098.1

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
J. E. Rasmussen, RL B. D. Shipp, PNL	R. F. Smith, EPA D. Butler, Ecology	Incoming 9404886

Subject: HANFORD FACILITY DANGEROUS WASTE PERMIT APPLICATION, SIMULATED HIGH-LEVEL WASTE SLURRY TREATMENT AND STORAGE UNIT (SHLWS T/S) PART A PERMIT APPLICATION (FORM 3), REVISION 2

INTERNAL DISTRIBUTION

Approval	Date	Name	Location	w/att
		Correspondence Control	A3-01	
		President's Office	B3-01	
		L. D. Arnold	B2-35	
		R. C. Bowman	H6-24	
		R. C. Brunke	H6-23	
		D. J. Carrell	H6-22	
		M. W. Cline	H6-24	
		W. T. Dixon, Assignee	H6-21	
		C. B. Hays	L4-97	
		P. J. Mackey	B3-15	
		H. E. McGuire, Sr. Staff	B3-63	
		S. M. Price	H6-23	
		F. A. Ruck, III	H6-23	
		J. F. Williams Jr.	H6-24	
		EPIC/AR	H6-08	
		RCRA File/GHL	H6-23	